

Influenza A (A/Texas/37/2024) H5N1 Pseudovirus

CATALOG NUMBER: MPsV-H5N1-TX24

Size: 5 mL

Description

This Influenza A H5N1 pseudovirus (or pseudoviral particle) is replication-deficient MLV (Murine Leukemia Virus) pseudotyped with the H5 and N1 proteins of the influenza A variants. They also contain the ORF for firefly luciferase (FLuc) as a reporter. Upon the Pseudoviral Particles (PP) infecting of the cells, the reporters will be expressed in the transduced cells. By measuring the FLuc activity in the cells, the infectivity of the PP can be determined.

Gene/Protein Sources

HA (A/Texas/37/2024/H5N1) (GenBank accession#: PP577943.1)

NA (A/Texas/37/2024/H5N1) (GenBank accession#: PP577945)

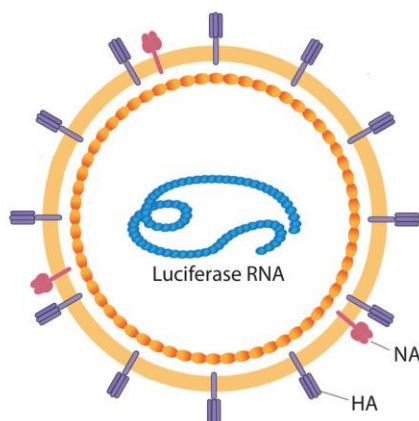


Figure 1. Illustration of the replication-deficient MLV particle pseudotyped with H5N1 proteins

Applications

Our Pseudovirus Particles (PP) generate robust chemiluminescent signals in cell assays when coupled with our firefly luciferase assay kit (Catalog # [CA-L165](#)), useful for: 1) screening potential inhibitor to block influenza A entry; 2) titrating neutralizing antibody against influenza A H5N1 (A/Texas/37/2024).

Features

- **Robust:** Excellent signal to noise (basal) ratio
- **Easy to use:** Amenable to HTS format (96-well, 384-well and 1536-well format)
- **Specific:** only measures the pseudovirus entry into host cells

Contents

5 ml, for one multi-well plate

Storage

Upon receiving it, store at -70 °C right away. Thaw* before immediate use.

***Note: read the instruction for thawing in the following protocol carefully. Do not aliquot and refreeze.**

Shelf Life:

Six months from the date of shipping when stored at -70 °C



ASSAY PROTOCOL

Note: requires a luciferase assay reagent (Catalog # [CA-L165](#)).

Cell Infection:

1. In each well of 96-well plate, add 50 μ l of influenza A H5N1 Pseudoviral Particles (12.5 μ l for 384-well plate); add 50 μ l of HEK293 cells (5×10^5 cells/mL) in DMEM (with 10% FBS and 20 μ g/mL Polybrene) (12.5 μ l for 384-well plates). Centrifuge at 700 rpm for 15 min.
2. Incubate for 48 hrs at 37 °C.

Measurement of Luciferase Activity in Infected cells

1. Do not remove supernatant. Add 100 μ l eEnzyme's luciferase assay WORKING SOLUTION (25 μ l for 384-well plates). Refer to the protocol of "Firefly Luciferase Assay Kit" (eEnzyme Cat.# CA-L165).
2. Read in a luminescence plate reader and record the data.

Data Analysis

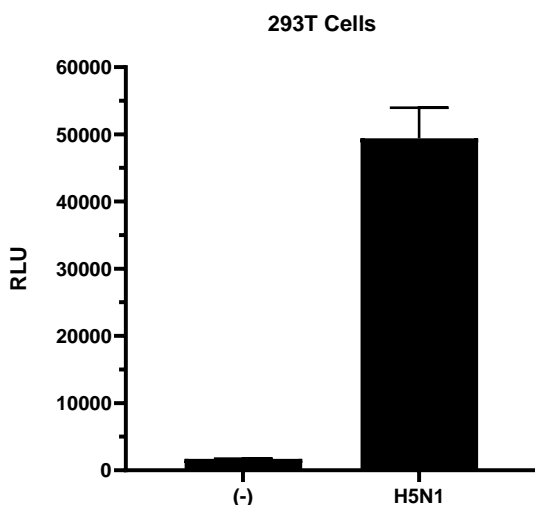


Figure 2. Pseudoviral Particle (PP) Infection Assays

(Pseudoviral particles on 293T cells in 96-well format; Luminescence plate reader: BioTek Synergy 2, gain 255)

H5N1: MLV-based pseudovirus w/ influenza A H5N1 proteins (MPsV-H5N1-TX24)

(-): Negative control (MLV-based pseudoviral particles, w/o H5N1 proteins)

